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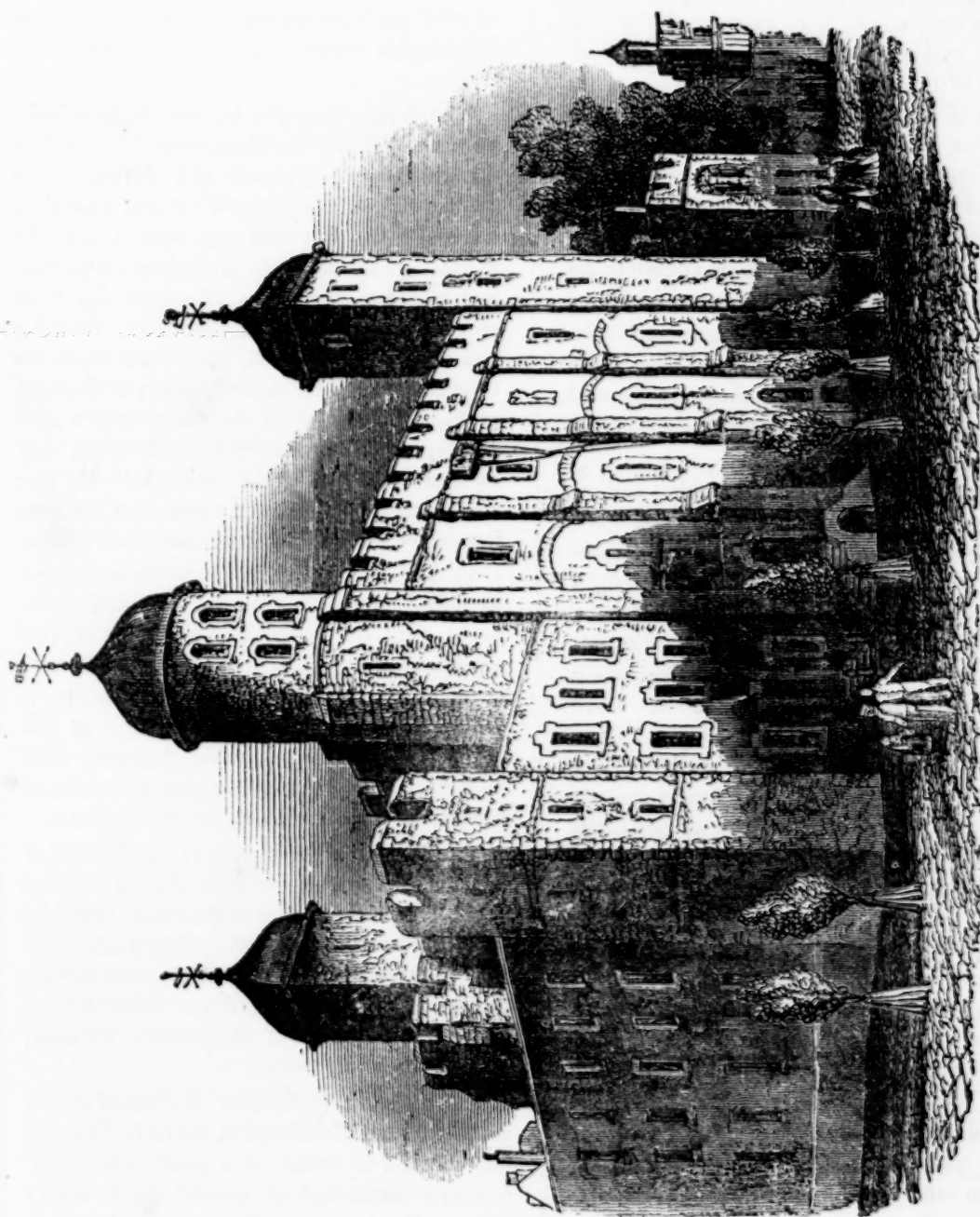
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THE TOWER OF LONDON

THE TOWER OF LONDON.

To an American visiting England, this ancient and celebrated citadel of the metropolis is one of the most interesting objects he meets with. This is partly owing to our familiarity with its name, and the variety of its parts and uses, but is chiefly due to its intimate connection with some of the most striking periods of English history, and many of the personages most conspicuous in periods of public danger and convulsion. We find there the prisons, the very apartments in which many state prisoners were immured, and the spot where they suffered death. In a long hall we walk between two rows of effigies of the sovereigns of England, in the dresses of their days, and several of them in their own armor, mounted on horseback, and presenting a most impressive spectacle, the more solemn for the silence which pervades the place.

The struggles of our British ancestors for civil and religious freedom, we consider as our own, if we view their nature and influence as we ought; and within these walls are numerous memorials of those events and personages whose memory most excites our feelings.

We entered through four gates, and by crossing the bridge by the Thames. We then passed under two more low, thick archways of stone, where we were stopped by a sentinel; and, on making known our object, a warder soon made his appearance, who undertook to be our conductor. He wore a long and broad-skirted coat, with a hat band formed of particolored ribbands.

The White Tower, (which stands in full view in our frontispiece,) is the most ancient edifice, and occupies the centre of the large circular piece of ground, of 12 acres and 5 roods, which now encloses various other buildings of different periods. It is a heavy square building, surrounded by the inner court, and was formerly the king's palace.

The curiosities in the Tower have been exhibited to visitors for ages; and the place has been an armory longer than any records show. We find a number of the same objects still there which were described by a German traveller in 1598. Among these are the oldest cannon in England, which are made of wood, and were used at the siege of Boulogne, on the opposite coast of France. Some of these old pieces were formed of long iron

bars, closely fitted, and bound round with hoops of the same metal.

There is a statue of Queen Elizabeth, which has been said to represent her as attired when she addressed her troops after the defeat of the Spanish armada. Though this appears to be irreconcilable with historical facts, the object is an interesting one, as it presents a nearly correct pattern of her dress, as well as a resemblance of her person, which, when contemplated in that ancient edifice, bring up to the memory lively pictures of her remarkable character and reign, so strongly associated with the Reformation, and therefore of such inestimable importance to us and our country.

The White Tower is believed to have been built by William the Conqueror. Under Rufus and Henry 1st, repairs and additions were made; and, while Richard 1st was absent on a crusade, the first wall was built round the place. Henry 3d made the tower his palace, and added to the works to render it a more secure retreat, about the year 1240. Nothing has been done to extend the Tower since the time of Edward 1st, and the kings of England gradually relinquished the use of it as a habitation, till the time of Henry 8th, when they entered it only on great occasions. He first converted it into a prison; and after his time it received multitudes of persons, of all grades, conditions, and characters, who in successive periods incurred the displeasure, and sometimes only the suspicion, jealousy, or vengeance of the various monarchs who in turn occupied the throne, or of their favorites to whom they delegated their power. In the reign of James 1st, it suffered greatly from neglect, but was put into a complete state of defence in 1792, in which we still find it.

The following description of the Tower of London, we extract from the Travels of Don Manoel Gonzales, a Portuguese merchant, and man of education, in 1730. The reader may find a translation of the whole manuscript, (which is among the Harleian collection,) in the second volume of Pinkerton's Voyages, a valuable family book.

"The Tower of London is situated at the south-east end of the city, on the river Thames, and consists in reality of a great number of towers or forts, built at several times, which still retain their several names; at present most of them, together with a little tower and church, are enclosed within one wall and

ditch, and compose but an entire fortress. It was the vulgar opinion that the Tower was built by Julius Cæsar; but history informs us that Cæsar made no stay in England, that he erected no town or fortress, unless that with which he enclosed his ships on the coast of Kent, nor left a single garrison or soldier on the island on his departure.

"This Tower, as now encompassed, stands upon twelve acres of ground, and something more, being of an irregular form, but approaching near to that of an oblong, one of the longest sides lying next the river, whence it rises gradually towards the north, by a pretty steep ascent to the armory, which stands upon the highest ground in the Tower, overlooking the white Tower, built by William the Conqueror, and the remains of the Castle below it on the Thames side, said to be built by William Rufus.

As to the strength of the place, the works, being all antique, would not be able to hold out four and twenty hours against an army prepared for a siege. The ditch, indeed, is of great depth, and upwards of a hundred feet broad, into which the water of the Thames may be introduced at pleasure: but I question whether the walls on the inside would bear the firing of their own guns. Certain it is that two or three battering pieces would soon lay them even with the ground, though after all the ditch alone is sufficient to defend it against a sudden assault.

There are several small towers upon the walls. Those of the largest dimensions, and which appear to be the most formidable, are the Divilin tower on the north west, the Martin tower on the north-east, and St. Thomas's tower on the river, near the Traitors' bridge, which I take to be part of the castle said to be built by William Rufus. Here is also a large tower outside of the bridge, called the Lion's tower, on the south-west corner, near which is the principal gate and bridge, by which coaches and carriages enter the Tower, and there are two posterns with bridges over the ditch to the wharf on the Thames side, one whereof is called Traitors' bridge, under which state prisoners used to enter the Tower.

"The principal places and buildings within the Tower are—

1. The Parochial Church; for the Tower is a parish of itself, in which are fifty houses and upwards, inhabited by the governor, de-

puty governor, warders, and other officers belonging to the fortress.

"2. To the eastward of the church stands a noble pile of buildings, usually called the Armory, begun by King James 2d, and finished by King William 3d, being 390 feet in length, and 60 in breadth. The stately door-case on the south side is adorned with four columns, entablature and triangular pediments, of the Doric order. Under the pediment are the king's arms, with enrichments of trophy work, very ornamental. It consists of two lofty rooms, reaching the whole length of the building. In the lower room is a complete train of artillery, of brass cannon and mortars, fit to attend an army of 100,000 men. We find a large number of Cohorn mortars, so called from the Dutch engineer, Cohorn, who invented them for firing a great number of hand grenades at once; with other extraordinary pieces cast at home, or taken from the enemy.

"In the room over the artillery is the armory of small arms, of equal dimensions with that underneath, in which are placed, in admirable order, muskets and other small arms for 40,000 men. They show us also the two swords of state carried before the Pretender when he invaded Scotland, in 1715, and the arms taken from the Spaniards who landed in Scotland, in 1719, &c.

"In the horse-armory the most remarkable things are some of the English kings on horseback, in complete armor, among which the chief are Edward 3d, Henrys 5th and 7th, Charles 1st and 2d, and King William, and a suit of silver armor, said to have belonged to John of Gaunt, seven feet and a half high.

"The White Tower is a lofty, square, stone building, with a turret at each angle, standing on the declivity of the hill, a little below the armory. The main guard of the Tower, with the lodgings of the officers, are on the east side of this building. In the Chapel usually called Cæsar's Chapel, and a large room adjoining, are kept many ancient records, such as privy seals in several reigns, &c., but the records of the greatest importance are kept in the Wakefield Tower, consisting of statute rolls from the 6th of Edward 1st to the 8th of Edward 3d.

"The Jewel Office, where the regalia (or royal ornaments,) are deposited, stands near the east end of the armory, which contains the imperial crown, &c.

From "Regnard's Journey to Lapland."

Funeral Ceremonies in Sweden

We arrived at Torno on Tuesday, and we came in good time to see the ceremony of the funeral of John Tornæus, whom I formerly mentioned, and who had been dead 2 months. It is the custom in Sweden to keep the bodies of their dead a very long time; this length of time depends on the quality of the deceased; and the higher the rank of the person, the longer is the funeral deferred. This time is afforded, that every thing may be prepared for this event, which is the most solemn that takes place in this country; and if it be said that the Turks lay out their property on marriages, the Jews on circumcision, and the Christians on lawsuits, we may add the Swedes on their funerals. In fact, I was astonished at the great expense laid out upon the funeral of a man who was not by any means of rank, and that, too, in a country so barbarous, and at such a distance from the rest of the world. They had no sooner heard of our arrival, than the son-in-law of the defunct immediately began to study a Latin oration, which he intended to deliver the next day in our presence, inviting us to attend his father's funeral: he was dreaming about it the whole night; and when he came before us the next day, he had forgotten the whole of his discourse. If low bows say any thing, and be the marks of eloquence, I can assure you that our haranguer was the prince of orators; but I believe the bending of his body was employed rather to hide the confusion which appeared upon his countenance, than to adorn his discourse. As we were acquainted with the object of his visit, we understood that he came to request our assistance at the ceremony, for we could understand nothing from his discourse; and a short time after the burgo-master of the city, with an officer who was there in garrison, came to take us in their boat across the water to the house of the deceased. On our arrival we found the whole house filled with priests habited with long cloaks and hats, which appeared by their heights to be columns employed to support some beam of a house.

The body of the deceased was laid in a coffin, covered with cloth, and placed in the middle of them. They watered him with their tears, which trickled down their moistened beards, the separated hairs of which formed various channels, and distilled

this sorrowful humor, which was employed instead of holy water. All these priests had left their parishes, and had come from a great distance; some of them had travelled more than a hundred leagues; and we were assured that such is their regard for this ceremony, if it had happened in winter, when the roads are in the best situation for travelling, there was no priest within two hundred leagues distance who would not have attended. The oldest delivered a funeral oration to all his assistants; and he must surely have said something very affecting, since his mournful air had almost drawn forth even our tears, who knew not a word he spoke. The women were in a little chamber, separated from the men, and they groaned in a dreadful manner; among others the widow of the deceased interrupted by her sighs the discourse of the preacher. While this sermon was delivered here another was preached in the Finland tongue at the church; and when the two discourses were ended, they set out to conduct the body to the church. Seven or eight respectable inhabitants carried him on their shoulders, and every one was anxious to lend his aid. This brought to my recollection what Virgil says of the entrance of the horse into Troy, when he mentions that both young and old were anxious to lend their aid to draw that machine into the city. We followed the corpse like the chief mourners, and the widow was afterwards conducted under the arms of her two daughters, the one of whom grieved much, while the other seemed not at all affected. The body was placed in the middle of the church, while some psalms were sung; and the women, in passing by the deceased, threw themselves upon the coffin, and embraced him for the last time. Now commenced the grand and principal funeral oration, delivered by John Rantinus, priest of Urna, who received a dish made of silver for his trouble. I cannot say whether he merited it; but I know that he cried much; and that to render every object more sad, he made himself hideous, in leaving his hair in disorder, and full of pieces of straw, which he had not had time to take out of it. This man related every occurrence in the life of the deceased, from his birth to his last sigh; he mentioned the places, and the masters whom he had last served, the provinces which he had seen, and did not omit the minutest circumstance of his

life. It is the custom in this country to deliver a funeral oration over lacqueys and servants, provided the relations are able to give a crown to the orator.

I attended through curiosity the funeral of a servant at Stockholm. The priest who delivered her funeral oration, after mentioning the place of her birth, and her relations, expatiated on the good qualities of the deceased, and exaggerated highly her knowledge of kitchen work, distributing his discourse into various divisions, according to number of ragouts which she knew how to prepare; and formed part of his oration by telling them she had only one fault, that of making every thing too salt, and that she shewed by this conduct the respect she had for prudence, of which salt is the symbol, and her little regard for the things of this world, which she threw away in profusion.

Mr. F. Webster's Lecture on China.

Fletcher Webster, Esq., has delivered two lectures on the country, the customs, and the peculiarities of the Chinese. As secretary to the Commission, of which the Hon. Mr. Cushing was the head, for the formation of a commercial treaty with that nation, he had the best opportunity of informing himself on all these topics.

Macao, he said, was a rocky promontory about a mile in width, which stretches out into the sea, on the south side of the great bay into which the Pekian, or Canton empties. It is about seventy miles nearly south of Canton, is connected by a narrow sandy beach with the great island of Honan, the northern end of which lies opposite Canton. It must resemble Nahant. This point holds the same reference to the whole of China, that a small town on the extremity of Cape Sable in Florida would have to the United States.

Next to Russia, China is the largest empire in the world. It extends from the 18th to the 52d parallel of north latitude, thirty-four degrees. It reaches from the 143d to the 70th meridian of longitude from Greenwich, 75 degrees. Its boundaries seem prescribed by nature alone. On the North, the great mountain ranges of Altai and the Gabolnoi separate it from Siberia, along a line of three thousand miles. The stupendous Himalaya, the Hindoo Coast, and the Belou mountains confine it on the South and West, and divide it from India and Afghanistan; and it stretches towards the Aral and Caspian seas an unascertained extent, occupying the limits stated. The Chinese empire covers the whole centre of Asia. The superficial extent is more than five millions of square miles. Were the territories of the United States to extend north and south from their extreme Northern points, from 25 to 54 North, inclu-

ding Oregon, Texas, and a large portion of Canada, and stretch between parallel lines from ocean to ocean, they would not equal in size the empire of China. This vast circumference is impenetrable to foreigners. At one point only, on its boundless frontiers, can it be entered; at the city of Mamatchin, on the Russian border, where the caravans annually pass with tea.

There are three chief systems of religion in China. Those of Confucius, of Lao Tse and Budhas.—The former is the religion of the most learned Chinese. Lao Tse differs not so much from the great sage Confucius as to make any difficulty in uniting both creeds. Buddhism is the religion of the uneducated classes throughout the empire. There is no state religion in China, properly speaking. The Emperor is a hereditary Buddhist, a follower of the Llama, but he is also a follower of Confucius. China is tolerant of all religions, and it is only from the effects of the course of Jesuits that the Christian religion has ever been prohibited.

Mr. Webster then went on to show how the provision for building hospitals, cemeteries, and churches, was got into the 17th article of our Treaty. Heiwan, the present Lieut. Governor of Kwang Provinces, a sort of secretary of Legation to Keying, was present at one of the many conferences which were had upon the subject of the treaty. The American interpreters, Drs. Harper and Bridgman, were also present with the American functionaries. When they had got to this item of the treaty, Hewang turned to Dr. Parker, whom he well knew, and who enjoys, in an extraordinary degree, the regard and respect of the Chinese, both officers and people, and said, with a waive of the hand and courteous smile, "Certainly, churches and hospitals, if you please." This ready compliance with our desires, said Mr. Webster, was a direct tribute of respect to Dr. Parker, which he well merited, and was highly honorable to the uncommonly liberal mind of the accomplished Chinese himself.

The Buddhist temples much resemble those of the Catholics, at least those of that faith in Macao. They have images: they worship the "Virgin Mother;" they burn incense; they offer prayers for the dead; they have nuns and also monks; and indeed so general is the resemblance as to have caused much annoyance, it is said, to the early missionaries. The Chinese Budhists, however, petition their gods for everything, even in all the ordinary matters of life. Beside the door of every shop is a little temple with an image in it. In the house are paintings of the god of Longevity, who receives devoted worship, and others also: for their Pantheon is large. At one temple at Macao, are the images of sixty deities.

Mr. Webster next proceeded to describe the particulars of an interview between the American Minister and some High Chinese functionaries. An imperial edict announced their

coming. After a while, a discordant noise, accompanied by loud cries at intervals, was heard, and the Americans looked from the blinds of the verandah to see the approach of the visitors. Two ill looking fellows with wire caps on their head, one of them with a whip, and the other with an axe, in his hand, led the procession. These men were the executioners, who always precede a high officer. Next came a score of poorly dressed and very dirty soldiers, with spears and shields, and halberts. Then a man or two on wretched ponies whose hair stood out in all directions, and whose manes and tails were ignorant of brush and currycomb; then the band of music, and then the sedan chairs of the great men themselves. They were four in number, all large and fine looking persons, dressed in light colored crape gowns, fastened round their waists by blue girdles and buckles of precious stones. The Americans stood up to receive them, with hats on, for it is Chinese etiquette to be covered as a mark of respect. They entered with their caps on, displaying their red and blue buttons and peacock's feathers. The button is fastened to the top of the cap, and the feather hangs down behind.

They approached, shook their hands at us, and the chief among them presented the letter to the Minister. On receiving it, he motioned them to be seated, and take off their caps, which, observing carefully the movements of the Americans, and keeping exact time with them, they did. One of the interpreters now read the letter, and after a short interval of silence, such sort of conversation as can be carried on by interpreters, and looks and signs, took place. The first civility was on their part, asking our names; this information being given and reciprocated, they proceeded to shock our notions of good breeding by asking our *ages*! They returned these civilities in like form. A luncheon came next; the guests being seated on the left, which, in China, is the seat of honor. Chop sticks had been provided for all, and the first experiment of the Americans with them so delighted their guests, that they could not refrain from laughter. They showed little inclination to eat, but a decided taste for Bostonian liquors, champagne and cherry bounce. A very red faced gentleman, a Mantchoo Tartar, disposed of half a dozen tumblers of bounce in as many minutes. It is customary to empty the glass when drinking with a friend; and as they each drank with all the Americans, they became as elevated as their voices, which, in conversation, Mr. Webster said, were at the highest pitch. One unavoidable civility, Mr. W. said, all the Americans would have gladly dispensed with. It is the fashion for every one to help himself with his own chop sticks from any dish on the table which he can reach; and when he feels desirous of offering a testimonial of particular regard, as well as respect, he reaches out and seizes something with his own chop stick, and motioning to the individual for whom he designs the favor, to open his mouth, puts the morsel, whatever

it is, between his teeth. As they are not peculiarly nice in their eating, and their teeth are by no means pearly, this part of the ceremony would have been gladly dispensed with. It was, however, not to be escaped; all that was left was retaliation, which they immediately practised. After an hour at table of shouting conversation on their part, and of nods and becks, and wreathed smiles on the other part, they all returned to the verandah to be surprised by yet further civilities. There they began to examine the apparel of the Americans, piece by piece, cravat, coat, waistcoat, shirt bosom, trowsers, sword belt, gloves, all in turn were inspected. Dr. Parker told them this was the very acme of Chinese politeness, and to be emulated without delay, whereupon they examined the caps, buttons, peacock's feathers, and other ornaments of the other party. Mr. Webster noted well the little embroidered bags, which, with fan cases, and snuff-boxes, they hang from their girdles, their thumb rings of agate, their silken girdles and jewelled buckles. Tung Ling, took a sword belt belonging to one of the Americans, putting it on to show how much too small it was, and marching up and down to show his portly frame. He struck his full chest and said in a voice of thunder—"I am a Mantchoo." He then seized my hand and squeezed it to show his strength. He was a terror-spreading Tartar General. Our friends retired, said Mr. W., after two hours intellectual intercourse of this kind. The procession was formed, the gongs beat, and the pipes squealed, while the executioners yelled, and the little ponies were pulled between their riders' legs, and we were left to reflect upon the Chinese and their customs.

Mr. Webster remarked that it was Mr. Cushing's and his own intention to go to Peking. He had therefore made up his mind to study the Court language of China, which was Mantchoo Tartar, the present reigning family being of that race.

Mr. Webster here gave an account of his voyage from Macao to Canton, in pursuit of a teacher.—The journey was a delightful one. Boats were at hand, built of light wood. Spacious; 12 to 15 wide, and 50 or 60 feet long. Most of these boats are taken up in cabins, which are built upon deck like a small room with many windows. They are furnished with chairs, tables, &c., with two masts—two bamboo sails of peculiar shape, and light draught. Their speed is very great. They call these "fast boats," or "Scrambling Dragons." The crews number 10 or 15 men and a commander. These boats are hired, provisioned, and secured from pirates, and then all is ready for embarking. These boats cannot approach within some rods of the shore, and the passage to them has to be in a smaller boat which is called a "Tanka." Those delicate and frail vessels are shaped like half an egg. A moveable cover like a gig-top is put upon the stern and centre. They are owned and managed always by

women, who are always on the watch for passengers. The women and little ones live on board and earn their rice by rowing passengers upon the river.—“Come to my boat,” is the cry of each of the crowd when they see a passenger approaching. A flock of gulls or crows suddenly disturbed hardly makes so much noise. The noise increases until the decision is made in which boat to go, and then there is an end to it. The defeated competitor shows no sign of ill-will, but helps his fortunate rival. With great noise the anchor is weighed, the sails spread, and the voyage begins. For 20 miles the waters are rough, owing to the northerly and easterly winds. No objects of interest are seen until one sees the Bocca Tigris, and the forts of the Bogue. Here, 50 miles above Macao, is the mouth of the Canton River. The shore is lined with high and hilly banks, and at the entrance, the shores are but a cannon shot apart. The Forts, upon examination, prove to be useless erections. They are not upon the top of a hill, nor are they guarded. To take them, the English had only to land beyond gun shot, march round to the summit of a hill, and fire upon the occupants. They consist of mere walls, and afford no protection against bombs, while the port-holes are as large as a common house door. Here is the great place for pirates, and the fast boats are busy as they approach the Bogue. Stones of the size of paving stones are put on deck, a heavy block of wood is got out and set mid ships, and then a piece of long iron like a crow bar, hollow, and fastened to a pivot, is fastened to a hole in the block. This is a piece of Chinese artillery, and is called a “jingall.” It is the most annoying of all fire-arms. The English found it so at Cabul, in China, and at the Kyler Pass. It throws balls of lead and iron three times the size of a bullet, and to a greater distance than a musket, and also with great precision. These machines could be borne from rock to rock by one or two men, and the fast boats usually have two or more. Along side the boats are suspended bamboos, with iron pikes in the end serving for spears. With these and the jingalls, and baskets of stones, they defend themselves against Ladrones. After passing the Bogue, the craft increase very much. The tall and white sails of a merchant ship are occasionally seen. The banks appear covered with rice fields. Whampoa, nine miles from Canton, is soon reached, and here the shores are high and beautiful. The Pagoda is seen and three miles of the barrier which the Chinese built to keep off the English.

Chinese proper, not including Chinese Tartary, was as fertile and well cultivated as France. The prosperity of the country, the cheapness of labor, and the various encouragements for marriage attended to increase the population. And China proper was about eight times the extent of France, while Chinese Tartary was but sparsely populated. Here the people lived in flocks and

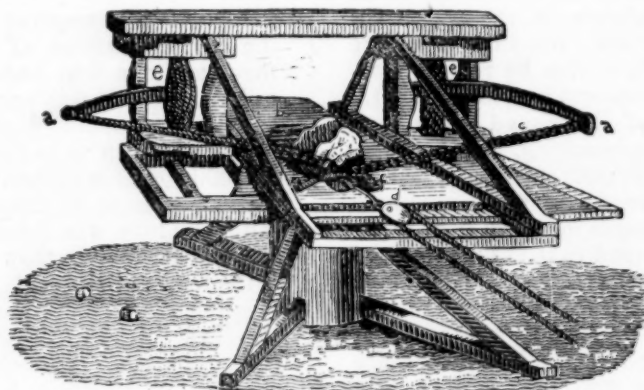
herds and they required great space for hunting. This division of the Empire covered three millions five hundred thousand square miles. Even if this part was only two-thirds as densely populated as Russia, and China proper as much so as France, there would be 240,000,000 of inhabitants, supposing Chinese Tartary to have 20 inhabitants to the square mile. There was hardly a possibility that she numbers fewer than this.

Canton, Mr. W. said, is upon a flat piece of ground, not more than a few feet above the level of the river. Lofty hills border it on the east, and there is an eminence near by, on which is a Tartar military station. The population was 600,000, streets but 8 feet wide, and houses low and dark. The city within the walls was smaller than the suburbs. It is difficult, however, to distinguish the two apart. The factories of the inhabitants are upon the very bank of the river, and there were the best buildings seen by Mr. W., except the temples. Mr. W., upon landing, first sought out a Tartar teacher. This Tartar was frightened at the task he had undertaken, and was in bodily fear that the teaching of a foreign Mantchoo would cost him his head. Upon the third visit, he begged to be let off, and as there was no reasoning him out of his fears that the Mandarins would seize him, he let him go.

Mr. Webster then gave a somewhat amusing account of an interview with Duke Pevon, and gave a description of his residence, which was represented correctly in the prints on our China crockery-ware. The manor was finely furnished, and attached to it was a theatre. About it were no grounds laid out. The general appearance of the house was pleasing, but there was nothing like comfort. Fifty or sixty women, all of the small feet kind, assembled either to see the place or to see the American party. They fled at the approach of the latter, and huddled together in distant apartments. The American ladies managed to keep them still, so that their costume and dresses were examined. Mr. W. described the dresses, which are very correctly represented in the books.

The Chinese confine the feet at the age of five, by cotton bandages, thus preventing their increase in size beyond that period. This evinces an unsteady and tottering gait. The fashion is not confined to any peculiar rank; indeed, there is no such thing as social rank in China. Parents with five or six children, usually select one of them to undergo the operation, with the hope that she may, in consequence, marry a rich man. The others are suffered to remain untortured.

Every Chinese, as soon as he is able to do so, takes a small footed wife. He sends for some old lady, and inquires where he can get a suitable wife. She then sees the young lady, Mise Lee Nung Now Leen, and describes her merits to Noo Chung. The arrangements follow, and then the wedding ceremony takes place.



AN ANCIENT BALISTA.

When viewing an improved machine, we often turn with much interest to some more awkward, inconvenient, expensive, or inefficient one, which it has superseded. This remark will apply to objects connected with many branches of art. When we compare the weapons of war of different ages and nations, we frequently find ground for various reflections, on the different circumstances and states of society, which have given them birth, brought them into use, and laid them aside. The bow is one of the simplest weapons, and apparently of so easy invention, that it may well be supposed that any family or tribe of the human race might soon devise, fabricate, and adopt it, even in the lowest stages of society, unless inhabiting a country wholly destitute of wood or game. Yet we find certain families of men utterly ignorant of the bow, in circumstances where no such cause can be assigned for the deficiency. We, however, have only touched upon this subject here, as one curious and interesting, without intending to pursue it any farther at the present time.

The ancients, particularly the Romans, in the advanced stages of their military career, adapted the principle of the bow to engines of great force. Having at first contented themselves with its use in the simple form of the hand-bow, for the projection of light, pointed shafts, at which most other nations have stopped, at length applied it to the destruction of life from greater distances and in greater number. In several different ways they much increased its power in their machines, sometimes combining two strong bows, and throwing both arrows of incredible weight and also large rocks, which performed dreadful execution among the ranks of the enemy, and even effected breaches in walls of considerable thickness.

The print above gives an idea of one class of these machines, as deduced from descriptions, and drawn by some of the curious enquirers into ancient customs. Two short pieces of elastic wood, of great strength, are secured by posts in a coil of ropes, *e.* in such a manner that, when their ends *a.* are drawn towards each other, the force applied must overcome the resistance of the elasticity of the ropes, as well as those of the wood. A rope and a pulley are here represented as applied for that purpose. In the double steel-bow, or catapult, by which arrows were thrown, a small windlass is represented as a substitute for the pulley. In the Balista, it will be seen, a rock is laid before the bow-string, on a block, or sort of little carriage, which is drawn back by the pulley, *c.* a latch or lever, being placed underneath, that, on reaching the projecting timber behind, it trips the tongue which holds the bow-string, and throws the whole power of the machine upon the heavy missile. From some of the ancient writers, we learn, that rocks of formidable size were sometimes thrown in this manner; and a reader of Roman history, or Josephus's interesting account of the wars of the Jews and Romans, can hardly understand certain passages, without paying some attention to the construction of engines like this, and also to the defences invented to resist them.

In *Jeremiah*. 33, v. 4, where "shooting an arrow" against a city is spoken of, and "coming before it with a shield," Calmet supposes the words to mean catapults, balistas and the large wooden screens which were used to stop the heavy missiles thrown by them. Nebuchadnezzar is presumed to have planted such machines upon "the forts" which he built against Jerusalem, when he "pitched camps" around it. *2 Kings*, 25, v. 1.



BIRDS OF PARADISE.

The surprising beauty and elegance of these birds, irresistibly attracts the attention. In the exuberance and delicacy of the plumage they so far surpass all other tenants of the air, that the sight of them calls forth curious enquiry, as well as the highest admiration. For a long time, however, absurd notions were entertained in Europe respecting their nature and habits. Some of the species are loaded with a surplus of long and light plumes, which appear wholly useless, and convey the idea that they must materially impede flight, and expose the bird to be actually blown away by a high wind. This peculiarity doubtless favored a belief in the childish story told by the Chinese traders, that these birds are naturally destitute of legs, and spend their whole lives in the air. To this men of lively imaginations added, that they never alighted for a moment, and builded no nests, but carried their eggs upon their backs until they were hatched. They were said to feed only on dew and vapors rising from the earth, and to take their rest only by hanging themselves by their longest feathers to the branches and twigs of trees. It is needless to say that all this has since been proved to be pure fable: but it was long supposed to be countenanced by the fact; that the skins imported into Europe came without legs, the natives of New Guinea and its neighboring islands, from which they are derived, uniformly cutting them off in preparing them for sale.

The Germans call this bird *Paradyss-vogel* and *Lust-vogel*, [Paradise and pleasure bird;] the Spaniards, *Passaro del Sol*, (sparrows of the sun;) while one species received the name of *Phoenix*; and the terms naturally aided in continuing such ideas among the people. It is strange that long after the truth had been discovered and published by writers of science and reputation, it made its way but slowly, and encountered great opposition. Merchants in Europe were interested in maintaining a high appreciation in these precious articles of trade, and encouraged these false notions; as in the East they favored the idea that the plumes of Birds of Paradise would ensure a superhuman protection on the chiefs who wore them in their turbans.

It is supposed that specimens of the skins of these birds were first introduced into Europe by Pignafetta, who had the honesty to attest that their legs had been cut off. Yet,

although his was confirmed by other writers, as Maregrave, John de Laet, Chisius, Wormius, Bontius and Hernandez, the public chose to believe the marvellous and ridiculous and to reject the truth. It would be well if, in our day and country, the people would imitate this example in nothing more important than questions in natural history.

RELIGIOUS INTELLIGENCE.

A MAGNIFICENT TEMPLE.—The travels of Missionaries are daily bringing to view objects of interest, alike to the enterprising merchant, the man of curious research, and the Christian philanthropist.—The Rev. Eugene Kincaid, for many years a devoted missionary in the Burman Empire, has recently returned, and is now addressing crowded audiences, on the condition of the heathen. In a recent discourse he described a magnificent temple, which, while it stamps with littleness the greatest of Christian churches, for architectural display, in many will excite fervent prayers of benevolence, that the zeal which, in the space of two years, among a heathen people, could erect such an edifice, to the honor of gods that have no knowledge, may be speedily enlightened and consecrated to the God of the whole earth.

The foundations of this temple (in the city of Ava, the capital of the Burmese Empire,) are of solid masonry, composed of bricks of the best materials. It is two thousand feet square, the walls being eight feet thick and seventy feet high. On the top of the walls rest two rows of massive pillars. At each corner of the walls rises a beautiful spire. On the top of each spire is placed a huge bar of iron, surmounting which is an iron net work, ten feet in diameter, in the shape of a spread umbrella. On the bottom edge of this are suspended bells of every size and tone. A piece of bright copper is attached to every clapper, so arranged that when the wind is strong every bell is set ringing.

On the top of this temple is a second one, one hundred and fifty feet square, and fifty feet high, each corner having its tower and bells; and surmounting this third is a fourth and last temple, seventy-five feet square and ten feet high, each corner also having its spire and bells. From the top of this fourth temple ascends a magnificent spire, with an immense iron net work at its summit—having numerous bells suspended from its edge.—On walking by the temple, when the wind is strong, and all these bells, comprising an endless variety of tones, are ringing, a wonderful sensation is produced, as though music was falling all around from the clouds.

The whole of the interior of this temple is stuccoed, and has the appearance of polished marble. In the centre is an immense throne, on which is a most gigantic image. Mr. Kincaid had the curiosity to climb up, for the purpose of measuring some portion of it; and from the end of the thumb to the second

joint, was eighteen inches. It was placed there at the cost of 150,000 rupees, or sixty thousand dollars. Besides this, in niches in the wall, are placed five hundred other images, each one larger than life, and each upon a throne, with inscriptions on the wall directly above them. On the wall are other images in tiers, higher and higher, until they reach the lofty ceiling. Look about you which way you will, in this immense building, and it seems as though the gods were looking down upon you wherever you turn your eyes. Look up this 274 feet of solid mason work, dedicated to idolatry, and see the thousands upon thousands of worshippers, who pour in their offerings of gold like water, and fancy, if you can, the expense of this idolatrous worship.

The temple, with its images—the immense amount of brick and stone work—the two thousand bells—the sculpture which adorns the building within and without—and the lofty towers—must have cost more than the creation of a hundred commodious churches in New York.

It was begun and finished within 2 years. Thousands were making brick, thousands more laying them, and thousands upon thousands engaged in the various departments.—Thousands of poor men cheerfully gave two months' labor to the work, others four, and but few citizens gave less, while the wealthy gave large sums.

DR. ALEXANDER'S REMARKS ON THE PRESS.—While the subject of the Press was under discussion, at a late meeting, the Rev. Dr. J. W. Alexander, of this city, who has given much attention to this point, made a few very eloquent and impressive remarks. He said it was not possible to exaggerate the evils of the cheap printing of the present day. It is a curse. He had never been so alarmed as during a recent journey. Every where had the vile trash, the *yellow-covered literature*; and the cheap novels that are sent out from this city, been obtruded upon his notice. The country is flooded. When visiting the Great Britain a few days before, he found in its lowest depths a man perusing a vile publication. Go down Nassau street, said he, and you will see unblushingly exposed in the windows, books and prints that not only shock the eye of modesty, but pandering as they do to the lowest appetite, are eminently calculated to deprave the mind and inflame the worst passions of the soul. He had made it a matter of conscience to look into this subject, and to see what was the character of these publications that are sent out in such vast numbers. The increase of this kind of books is dreadful; the stream runs blacker and deeper every day. The press is used here extensively to print Infidel publications for the South American States. He spoke of Eugene Sue's writings as being most dangerous; he has a wonderful power of exciting the basest passions of the heart. "His

"Wandering Jew" is said to be an attack on popery, but it is also an attack upon the foundations of all religions. He spoke powerfully upon the necessity of pastors uttering their loudest warnings against this kind of reading, in public and private.

He would also use the fact that this corrupting and poisonous literature is so generally spread, as a powerful argument for circulating religious publications. In his opinion some publications of the Tract Society, in a literary point of view, would yield to none, and might be given to the most refined and most intelligent.

GERMANY.—Heidelberg, Sept. 27.—Yesterday evening, soon after the arrival of Ronge and his companies, the heads of the German Catholic community were cited to appear before Stadt Director Bohme, who made it known that, in virtue of the rescript of the Minister of the Home Department, the said Ronge could not be permitted to perform ecclesiastical service, or to deliver any public address. At the same time it was intimated that if security for compliance with this order should not be given, Ronge must leave the town immediately. Under these circumstances the persons who had appeared felt themselves bound to give the required security. From the prohibition against speaking, addresses on giving toasts were expected. In consequence of this order no devotion can be performed by German Catholics, and the voice of Ronge must not be heard in any public place. A festival was, however, held at Prince Max's at which more than 400 persons attended.—Ronge was there joined by Paulus and Winteri; and the priests Dowait and Jerome Reuchler, who had appeared for the German Catholics, gave the meeting an account of the proceedings taken by the police, and led a cheer for Ronge, which was given with great zeal.

THE PRESS IN GERMANY.—"So far the Reformation under Ronge has spread with much more rapidity than that commenced by Luther. The Press which was in its infancy in the 16th century, has now a strength which even despotism dreads to encounter. In some places Ronge is forbidden to preach, and compelled to desist; but pamphlets and newspapers preach the new doctrines in spite of the magistrates."

On one of the peaks of the Alps there is a block of granite, weighing by estimate 121,576 tons, so nicely balanced on its centre of gravity, that a single man may give it a rocking motion.

The walls of Ninevah were 100 feet high, and thick enough for three chariots abreast.

MISCELLANEOUS.

A PRINCELY HEBREW.—From Prague, we hear of the death, at the age of 77, of a Hebrew merchant. In his lifetime he devoted the larger part of his immense revenues to the encouragement of science, art and natural industry—and to the relief of the indigent, without distinction of religion or race; and by his will he has bequeathed three millions of florins—300,000*l*—among the benevolent institutions of all the principal cities of Bohemia.

Water well set at work.—In the village of Hastings, on the east bank of the Hudson, 20 miles from the city, is a large spring affording water sufficient for two or three small factories. From this spring Mr. B. has laid a pipe of three-quarter inch bore, 2,393 feet long, supplying the houses with water. The fall is 110 feet, being 20 greater than the Croton in Fulton street. It operates to the entire satisfaction of this projector, Mr. Peter Nodine, fulfilling the most sanguine expectations. The price, exclusive of the expense of digging, is 10 cents per foot, which is 33 per cent cheaper than lead pipe. It may be considered indistinctible.

Mr. Ball has laid 800 feet of his pipe of 2 1-2 inches bore in Providence, R. I. We understand gives entire satisfaction. In other places, and in numerous houses in this city, he has put his pipes of various sizes, and for various purposes. Mr. B. is a persevering and ingenious mechanic, entitled to the patronage of his countrymen."

To the Editors of the Louisville Journal:

GENTLEMEN.—I find the following touching incident in the Mobile Advertiser:

"A correspondent of the Charleston Courier, writing from Newport, Rhode Island, relates the following touching incident in connexion with the early history of the Israelites of that city, and the religious devotion manifested in the preservation of their institutions, by one of the denomination who reveres the faith of his fathers:"

"The liberal policy of the founders of Rhode Island had drawn hither (to Newport) a community of wealthy and enterprising Israelites, who gave an impulse to its commerce. Now there is not a single Jewish family, nor one of their descendants on the Island; but their ancient and venerable synagogue still remains in perfect order, as if prepared for their reception, and their cemetery, with its monuments, walks, and trees, is a model of neatness and ele-

gance. Its stately gateway is occasionally opened to receive the remains of an Israelite from some distant place, whose last wish may have been to rest here with his fathers. Even the Jewish street is still kept in perfect repair, through the munificence of a Jewish merchant, whose grandfather was a Rabbi of this place. I notice, too, with pleasure, that the classical building of the 'Redwood Library' is undergoing a complete renovation at the expense of the same individual, who is a citizen of New Orleans."

The following additional particulars form a portion of the early history of Rhode Island. October 19th, 1667, thirty-five feet of square ground was deeded to Mordecai Campaunal and Moses Packeckoe for a Jewish cemetery.—The first Jewish settlers were of Dutch extract from Curasao. In 1750 and '60, many wealthy Jews from Spain and Portugal settled amongst them. A few most conspicuous were the Lopez, Riveras, Pollocks, Levis, and Hart and Isaac Touro. The latter was at the head of the congregation as clergyman. They erected in 1762 a house of worship, which was dedicated on the 2d of December, 1763, with great pomp and splendor, by a congregation of over three hundred Jews. Aaron Lopez was celebrated as a merchant of great enterprise, seeking out new channels for the promotion of commerce, owning some thirty sail of vessels, and about the first to fit out whalers for the Falkland Islands. An instance is also related which should serve as an example to the present enlightened period. A merchant, an Israelite, of great enterprise, largely embarked in commercial pursuits, was in the end unsuccessful, losing his ALL, and with large debts unpaid. He removed to Boston, where, in a few years, he accumulated wealth, returned to Rhode Island, and settled himself permanently with his family. Soon after, he gave a dinner party, inviting among his guests all to whom he was indebted. Dinner announced, each gentleman was assigned his place at table by cards with the name written on the plates. On turning them over, under each plate was found a check for the principal with interest in full to that day. He thus liquidated every liability, which his creditors, from the length of time that had elapsed, had entirely relinquished. Abraham, the son of Isaac Touro, a native of Rhode Island, made his fortune in Boston, and died in 1822, leaving \$10,000 and \$5,000 in trust to the Legislature for the support of, and to keep in order

the synagogue and burial ground with the streets leading thereto, now called Touro street, which to the present is strictly complied with. Moses, the nephew of Aaron Lopez, was the last resident Jew. He died in New York, and, at his request, was removed to Newport and buried beside his brother Jacob. Not a resident Jew was left on the island in 1820. The history of Rhode Island lauds them for their integrity and upright course, and refers to them as an example to be followed by all.

A NEW CITY.—The following animated description of one of the last wonders of our day, the new city now rising at Birkenhead, near Liverpool, is from the pen of a noble diplomatist, and will be read with interest: "I have made a very agreeable trip to Birkenhead, which is a place rising as if by enchantment, out of the desert, and bidding fair to rival, if not eclipse the glories of Liverpool. Seven years ago there were not three houses on that side of the Mersey—there are now above 20,000 inhabitants, and on the spot where Sir W. Stanley's hounds killed a fox in the open field, now stands a square larger than Bellgrave-square, every house of which is occupied

At Liverpool there are now ten acres of docks, the charge for which is enormous; at Birkenhead there will be forty-seven acres, with rates two-thirds lower, which will gradually diminish until (supposing trade to continue prosperous) they will almost disappear and the docks become the property of the public at the end of thirty years. It would have been worth the trouble of the journey to make acquaintance with the projector and soul of this gigantic enterprise, a certain Mr. Jackson. With his desire to create a great commercial emporium proceeds, *pari passu*, that of improving and elevating the condition of the laboring classes here, and before his docks are even excavated, he is building docks for 300 families of work people, each of which is to have three rooms and necessary conveniences, to be free of all taxes, and plentifully supplied with water and gas, for 2s 6d a week for each family. These houses adjoin the warehouses and docks, where the people are to be employed, and thence is to run a railroad to the sea, and every man liking to bathe will conveyed there for a penny. There are to be wash-houses, where a woman will be able to wash the linen of her family for two pence; add 180 acres have been devoted to a park, which Paxton has laid out, and nothing at Chatsworth can be more beautiful.

At least 20,000 people were congregated there last Sunday, all decently dressed, orderly, and enjoying themselves. Chapels and churches, and schools, for every sect and denomination, abound. Jackson says he is sure he shall create as vigorous a public opinion against the public houses as is to be found in the higher classes. There are now 3000 workmen on the docks and buildings, and he is about to take on 2000 more. Turn which way you will, you see only the most judicious application of capital, skill, and experience—every thing good adopted, every thing bad eschewed from all other places, and as there is no other country in the world, I am sure, that could exhibit such a sight as this nascent establishment, where the best interests of commerce and philanthropy are so felicitously interwoven. I really felt an additional pride at being an Englishman."—[The writer of this tribute to Birkenhead, "the City of the Future," is Lord Clarendon, formerly our ambassador to Madrid.]—*European Times*.

From another English paper.

BIRKENHEAD.—The commissioners of this rising town, which is exactly opposite to Liverpool, on the other side the Mersey, have given notice of their intention to apply to Parliament for power to purchase the basin and property adjacent to the south end of George's pier, on the Liverpool side, for purposes suitable to the increasing wants and importance of their town; they also seek to obtain power to purchase property adjacent to the present ferry, for the purpose of greatly extending the ferry accommodation, and for widening the streets and approaches to the same.

A Child Choked to Death by a Chesnut.—An interesting daughter, about eighteen months old, of Mr. John H. Walker, of Gardner, Mass., while eating chesnuts on Wednesday, was choked to death. As soon as it was discovered to be choked, a messenger was sent for Dr. A. S. Carpenter of South Gardner, but before he arrived the child was dead.—*Worcester Spy*.

The population of the earth is estimated at one thousand millions. Thirty millions die annually, eighty-two thousand daily, three thousand four hundred and four every hour, and fifty-seven every minute.

In the Arctic region, when the thermometer is below zero, persons can converse more than a mile distant. Dr. Simmons asserts that he heard every word of a sermon at two miles distance.

From the Edinburgh Philosophical Journal.
On the Diluvial Epoch.—By Professor F. J. Pickett of Geneva.

The examination of a considerable number of fossil bones from the caves of France, and of the bones found in the gravel of the environs of Geneva, as well as a comparison of the different memoirs published on the organic remains of the diluvial epoch, have led me to form a different opinion from that generally entertained on this subject.

I think that the diluvial epoch ought to be united with the modern epoch. I believe that there was no new creation, and no interruption of organic life, between the time when the bones of bears were buried in caverns and the present period.

The first proof I shall give is derived from the study of the arenaceous deposits in the neighborhood of Geneva.

Now in the more ancient alluvial deposits, bones are found which prove that our valley was inhabited at that epoch by species of mammalia *perfectly identical* with those which now live there.

These ancient alluvial deposits are probably contemporaneous (or nearly so) with those which exist in various other parts of the Swiss plain, and in which there have been found species now living, as well as remains of elephants.

These facts seem to me to show that the mammoth lived along with species identical with those of the present day, and to prove that there was no new creation between the deposits of which I have been speaking and those of our own period.

I find a second proof in the caverns and breccias themselves. Some species are there met with which I believe to be extinct, such as the bears of the caverns, the hyænas, and some others; but there are also found bones of a larger number of species, which cannot be distinguished from those now living in Europe. The bats, the shrews, the moles, the badgers, the hares &c., of the caverns, appear to be identical with our own. Is it probable that they should all have differed from the species now living in their external characters, and that, having been destroyed *en masse* by diluvial inundations, they should have been replaced, by means of an entirely new creation, by species which we are not able to distinguish from them!

It must be remarked, that it is necessary to distinguish between the creation of man and his establishment in Europe. It is probable that he did not arrive there till after the inundations which destroyed the cavern-bears and the contemporaneous animals. It may even be supposed that the last diluvial deposit and, in particular, the arenaceous formations of Switzerland, were formed before the human species inhabited our regions. There is nothing, however to prove that man had not been created in Asia at the commencement of the diluvial epoch. It must be remember-

ed that the Sacred Writings, and the traditions of various nations, authorize us to believe that man witnessed some of those great inundations which were entitled to the name of deluges. Subsequently, tribes of the human race became more numerous, and migrated to Europe; and every one knows that philological, historical, and physiological researches all combine to demonstrate that Asia was the cradle of the nations which have successively invaded our continent.

The state of theoretical palæontology is still too uncertain to allow of our attaching ourselves too strongly to this or that hypothesis. It is the study of facts which is essential, and we must engage in that study unbiassed by preconceived ideas or particular systems.

KENAWHA GAS.

By Mr. James A. Lewis, of Kenawha, C. H. Va. From the Charleston Republican.

The existence of large quantities of gas at various points throughout the whole extent of the salt region on the Kenawha river, was known to the first white men that explored this beautiful valley. It appeared escaping through apertures in low grounds and springs of water. As a company of the earliest explorers encamped on the banks of the river, one of their number, in a dark night, took a torch to light his way to the spring near by the encampment, and in waving it over the spring, to his great consternation it took fire, the gas burning upon the surface of the water. It was thence called the "Burning Spring," and is the same that is mentioned by Mr. Jefferson in his Notes on Virginia. It is still there, but, as we saw it last week, a mere mud-puddle. The water agitated by the gas resembles a boiling pot. It readily ignites, and for a short time it burns with a blue blaze on the surface of the water; even when the water is dried up, the gas will burn brilliantly between one rain and another.

When, in process of time, the salt-manufacturers, either from a failure of the salt-water above the stratum of rock, some 15 or 20 feet lower than the bed of the river, or the purpose of procuring the water in great abundance, sunk their wells by boring far below the surface of the rock, the gas, in various quantities, made its appearance in the wells, in some instances jetting the water into the air, when being united, it spread the flame about, to the no small amazement and terror of the workmen. When this happened, they used to say "*the well is blowed*." The stream of gas, however, soon subsided, or acted only with sufficient power to force the water up into the gum or shaft, which is part of the trunk of a sycamore tree, about four feet in diameter, hollowed out so that the shell is not more than four inches thick. From the gum it was pumped into the cistern or reservoir.

Our salt wells are commenced near the edge of the river at low water. The gum is

sunk down to the rock, a distance of from 15 to 20 feet, the lower end resting tightly on the rock. The other end is usually a few feet above the ground. This excludes the fresh water above the rock, and serves as a reservoir to receive the salt-water, when it is reached by boring through the rock and the various strata of earth.

Three years ago, William Tompkins, Esq., first obtained a permanent and steady stream of gas, of sufficient power, not only to force the water up from the depth of a thousand feet into the gum, but to carry it into the reservoir elevated many feet above the bank of the river. This saved the expense of a pump, which is worked by a steam-engine. In a short time, it occurred to him, that this gas could be turned to a still more useful purpose. He therefore erected, over the reservoir or cistern, a gasometer, which is simply a hog-head, placed upright, in the lower end of which is inserted the pipe that conveys the water and the gas from the wells, the water running out through a hole in the lower end, and in the top is inserted a pipe that conveys the gas to the mouth of the furnace. When ignited, it produces a dense and intensely heated flame along the whole furnace under the row of kettles, 100 feet long, by 6 deep, and 4 wide. This saves the expense of digging and hauling coal.

Subsequently, Messrs. Warth and English, whose works are on the opposite side of the river, obtained a similar stream of gas, which has been used successfully in the same way; and more recently Mr. Dryden Donnally Mr. Charles Reynolds, and some few others, produced a partial supply of gas to heat their furnaces in the same way.

But the most remarkable phenomenon in the way of natural gas here, and we have no doubt, in the whole world, is that at the works of Messrs. Dickinson and Shrewsbury, which has been exhibited for nearly two months past. In this well the gas was reached at the depth of one thousand feet. What the upward pressure of the gas to the square inch is, through the aperture, which is three inches in diameter, we are unable to tell; and, perhaps, it would be impossible to ascertain. It has never had a free and unobstructed vent. There is now, at the bottom of the well, an iron sinker, a long piece of round iron nearly filling the aperture; on this are 600 pounds of iron, and about 300 feet of auger-pole, used in boring, in pieces of 10 and 20 feet in length, with heavy iron ferules on the ends, screwed into each other. Notwithstanding all this obstruction, a stream of water and gas issues up through a copper tube, 3 inches in diameter, inserted into the well to the depth of 500 feet, with the noise and force of steam generated by the boilers of the largest class of steamboats. It is computed that a sufficient quantity of gas comes from this well to fill in five minutes, a reservoir large enough to light the city of New York during twelve hours. When we reflect that

this stream of gas has flowed, unabated, for nearly two months, what must be thought of the quantity and the facility of manufacturing it down below! In the springs hard by, and in the other wells, (with perhaps the exception of that of one or two others,) there appears, as yet, to be no diminution in the quantity at any place where it has heretofore been known to exist.

On the known thickness of the crust of the Earth.

The Eselchacht at Kuttengerh, Bohemia, had reached the enormous depth of 3545 feet.

At St. Daniel, and at Geist, on the Rohrerbuhel, the works, in the 16th century, were 2916 feet deep.

The absolute depth of the mines in the Saxon Erzgebirge, are 1824 and 1714 feet; the relative depths of these respectively are only 626 and 260. The absolute depth of the rich workings in Joachimsthal, Bohemia, is 1919 feet; but the sea level has not been attained.

In the Harz, the workings in the Samson pit, at Andreasberg, are carried on at the absolute depth of 2062 feet. In Old Spanish America, I know of no deeper mines than those of Valenciana, near Guanajuato, Mexico; I found the Planes de San Bernard 1582 feet deep; but this mine does not reach the level of the sea by 5592 feet. If we compare the depth of the old Kuttengerh works (a depth which exceeds the height of the Brocken, and only falls short of that of Etna by 200 feet) with the heights of the loftiest buildings that have been reared by man (the Pyramid of Cheops and the Minster at Strasburgh,) we find that the mines are to these in proportion of 3 to 1.

Basin-shaped, curved strata, which dip down on one hand and rise at a measurable distance, although not penetrated by mines or shafts, still suffice to give accurate information of the constitution of the crust of the earth at great depths from the surface.

The depth of the coal measures at Mont St. Gilles, Liege, which M. Von Oyenhausen has estimated at 3650 feet below the surface, must lie at the depth of 3250 feet below the sea level, inasmuch as Mont St. Gilles is certainly not 400 feet high; and the coal basin at Mons lies fully 1750 feet deeper. These depressions, however, are trifling when compared with that of the coal strata of the Saar-Revier.

These Belgian coal measures, therefore, tie as far below the level of the sea as Chimborazo rises above it. From the highest summit of the Himalaya to the bottom of this basin, containing vegetable remains of the primæval world, we have a perpendicular depth of 45,000 feet.

In a chasm, near the Dead sea, into which the Jordan flows, are beds of rock, which, lie 1300 feet in perpendicular depth below the level of the Mediterranean Sea.

POETRY.

WINTER IS COMING.

BY ELIZA COOK.

Winter is coming! who cares? who cares?
Not the wealthy and proud, I trow:
"Let it come," they cry, "what matters to us
How chilly the blast may blow?"

"We'll feast and carouse in our lordly halls,
The goblet of wine we'll drain,
We'll mock at the wind with shouts of mirth
And music's echoing strain.

"Little care we for the biting frost,
While the fire gives forth its blaze;
And what to us is the dreary night,
While we dance in the waxlight's rays!"

'Tis thus the rich of the land will talk;
But think, oh ye pompous great,
That the harrowing storm ye laugh at within,
Falls cold on the poor at your gate!

They have blood in their veins as pure as
thine,
But naught to quicken its flow;
They have limbs that feel the whistling gale,
And shrink from the driving snow.

Winter is coming! oh, think ye great,
On the roofless, naked and old;
Deal with them kindly, as man with man,
And spare them a tithe of your gold!

THE MASTODON.—We hoped to be able to present our readers this week, with a print of the skeleton of the Mastodon, now exhibited in this city, a description of which we inserted in our last number. We are, however, obliged to defer the publication of both for the present.

EPIGRAM.

"How much corn may a gentleman eat?"
whispered Fip,
While the cobs on his plate lay in tiers;
"As to that," answered Q, (and he glanced
at the heap,)
"Twill depend on the length of his ears!"

CULTURE OF MUSHROOMS.—"You ask me about the cultivation of mushrooms. I have two houses in which I have raised them, one built expressly for the purpose, 50 feet long, 14 feet wide, 6 feet high, plastered inside, with a flue from a stove running on the ground through the centre.—On the top of the flue are hollow piles for the purpose of holding water and keeping the room moist. I have two tiers of beds on each side of the house, one over the other, 3 feet apart and 5 feet wide. We first filled each bed with horse manure, with as lit-

tle straw as possible, say one foot deep; we then put on 3 inches of rich black mould; in this earth we plant the spawn of the mushroom broadcast. That from England comes in blocks like brick. This is broken up into pieces the size of a walnut, and planted about three or four inches apart. The best time to make the beds is in October and November. Keep the house warm; about 65 degrees, and damp and dark, and cover the bed with hay 3 inches deep. The mushrooms will be ready to pick in about a month, and will continue until August or longer; but in very warm weather they get covered with bugs. The other house is smaller, and I heat it with a large pile of horse manure, which being kept wet my gardener thinks raises the best mushrooms."

ROSSELL L. COLT.

Paterson, 7th May, 1845.—*Am. Ag.*

TREES.—This is a season for *thinking* about transplanting trees. People have for a long time, been talking about that important work. The leaves are falling, and the whole portion of the tree, root and branches, wood and bark, are attaining that quality which is favorable to transplanting, and to new growth. Those who are in haste, and are desirous to sit early under the shade of their own trees, may find it convenient to wait until very cold weather shall freeze the earth around the roots, and then large trees may be removed with safety, if done with skill and care; and in the spring they will go on growing and flourishing just as much as if they were at home; in the emphatic words of one who loves the business, "they will never know they have been removed." The truth is, the tree is asleep, and taking with it so much of its native earth, its roots unbroken, and its branches uninjured, it wakes up in the spring, and goes about its business without having dreamt of the change of position. The trees now in front of the State House are examples.—*U. S. Gazette.*

The earth is 7,916 miles in diameter, and 24,880 miles around.

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